SIVO Status - Nov 2007 Reporting Period	
Clune, Thomas	Civil Servant
Delabeaujardiere, Jeff	Civil Servant
Gurganus, Joey	Civil Servant
Harris, Marquita	Civil Servant
Herring, David	Civil Servant
Jones, Joycelyn	Civil Servant
McConaughy, Gail	Civil Servant
Mitchell, Horace	Civil Servant
Perkins, Lori	Civil Servant
Putman, William	Civil Servant
Shirah, Gregory	Civil Servant
Talabac, Stephen	Civil Servant
Adams, Ruby	Service Source, Inc.
Ardizzone, Joseph	SAIC, Inc.
Bahler, Michelle	Northrop Grumman IT
Bhat, Maharaj	AMTI
Bridgman, Thomas	Global Science & Technology
Brin, Genia	SAIC, Inc.
Bungato, Dennis	SAIC, Inc.
Burns, Robert	Northrop Grumman IT
Chettri, Samir	Global Science & Technology
Clemence, Lara	Global Science & Technology
Cohen, Jarrett	Global Science & Technology
Cruz, Carlos	Northrop Grumman IT
Damon, Megan	Northrop Grumman IT
Dixon, Nancy	Global Science & Technology
Fay, Linda	Northrop Grumman IT
Freeman, Shawn	Northrop Grumman IT
Greenseid, Joseph	Global Science & Technology
Higgins, Glen	Northrop Grumman IT
Hoff, William	AMTI
Jacobi, John	SAIC, Inc.
Kekesi, Alex	Global Science & Technology
Kouatchou, Jules	AMTI
Link, Robert	Northrop Grumman IT
Mirvis, Eugene	AMTI
Oloso, Hamid	AMTI
Rood, Ricky	University of Michigan
Rosenberg, Robert	SAIC, Inc.
Schwartz, Brent	AMTI
Snodgrass, Stuart	Global Science & Technology
Sokolowsky, Eric	Global Science & Technology
Starr, Cindy	Global Science & Technology
Syed, Rahman	AMTI
Terry, Joseph	SAIC, Inc.
VanAartsen, Bruce	Northrop Grumman IT
Walker, Gregory	SAIC, Inc.
Williams, James	Global Science & Technology
Wojcik, Gary	Northrop Grumman IT
Womack, Brice	Northrop Grumman IT
Zhou, Shujia	Northrop Grumman IT
NEW HIRE #1	AMTI
NEW HIRE #2	AMTI
UDAYA REPLACEMENT	AMTI
SE TOOLS NEW HIRE	SAIC, Inc.
Univ. Ill - Chicago (consultant)	University of Michigan
SVS - Consultant	University of Michigan

	Civil Service
	Service Source, Inc.
	SAIC, Inc.
	GST
	Northrop Grumman IT
	AMTI

TASK	PLAN (NOV 2007 - APR 2008)	ACCOMPLISHMENTS	COMMENTS
281945 Earth System Modeling Framework Support / Software Integration Task The Software Integration and Visualization Office (SIVO) provides software and system integration services for enabling reuse of large Earth system models and model elements across teams of scientists both inside and outside of the Agency. To enable such interaction SIVO is focusing resources on the improvement and evolution of legacy software such that components common to multi-agency Earth science models can be more rapidly used and more seamlessly reconfigured to create new "systems of systems". The Earth System Modeling Framework (ESMF), under development since 2000, provides a useful architecture for the community to build the type of compatibility needed across the various modeling activities. It is the role of SIVO to assist investigators with the implementation of ESMF into their research codes. Compliance to the framework is determined by the use of standardized ESMF data structures and implementation of its run-time environment.	ESMF	SIX MONTH FEVER STATUS	
	ST1:ESMF Integration		
	SIVO will assist groups in the development of coupled Earth System models through the redesign of existing software and the accommodation of the ESMF. Deliverables under this task include: monthly status report on ESMF integration progress due by the 15th business day of each month; other technical deliverables include: February 1, 2008: Complete 2 ESMF/MAPL components for BioGeochemistry from Watson Gregg. January 10, 2008: Provide status (oral report) on implementation of basic coupled LIS/GFS running at JCSDA Testbed (the deliverable will be contingent upon availability of the NCEP computing environment). April 1, 2008: Complete ESMF/MAPL component for the Chemistry Solver from David Lary. April 30, 2008: Demonstrate the coupled LIS/GFS running using sub-grid tiling by elevation. April 30, 2008: Estimate effort for creating an ESMF/MAPL component for GISS Aerosol subsystem for Dorothy Koch.		
	ESMF	SIX MONTH FEVER STATUS	
	ST2: Curator		
	SIVO shall continue the "pathfinder" effort begun in FY 2007 to determine the best approach to infuse metadata being developed by the NCAR-led "Curator" effort into appropriate model elements of interest to the MAP program. Staff will prepare a list of proposed model elements and prepare a summary of requirements for deployment of Curator metadata. Staff shall work closely with personnel from the Code 610.1 and synergize with the Curator efforts now underway with GEOS5. Deliverables: February 29, 2008 - Curator status report; April 30, 2008 - Curator status report (both oral reports).		
	ESMF	SIX MONTH FEVER STATUS	
	ST3: Other		
	ESMF	SIX MONTH FEVER STATUS	
	ST4: Other		
	ESMF	SIX MONTH FEVER STATUS	
	ST5: Other		

POPULATE THIS TABLE ON THE "SUMMARY" SHEET; DO NOT MAKE DATA ENTRY HERE

TASK	PLAN (NOV 2007 - APR 2008)	ACCOMPLISHMENTS	COMMENTS
281945 Modeling, Analysis, and Prediction (MAP) Program Support The Software Integration and Visualization Office (SIVO) provides software and system integration services and analysis capabilities for the NASA Earth modeling community, including the participants in the NASA Modeling, Analysis, and Prediction (MAP) Program. A major goal of the MAP program is to dedicate technology to build an environment to enable: • coupled Earth System models; • increased model and analysis fidelity; • better estimates of uncertainty and reliability; • bringing data to bear on the models for the purpose of validation; • new tools for testing new methods.	MAP Support	SIX MONTH FEVER STATUS	
	ST1: MAP Modeling Environment (MAPME) Tool Dev		
	• Maintain and sustain the MAP program web site, providing complete delivery of news and information for investigators; make selected versions of investigator-provided model software and related documentation available through the MAP web site and/or through the SIVO Knowledge Base (SKB), making certain this effort is coordinated with deliverables noted in Subtask 3, GEOS5 data portal; • Interact and coordinate with the Curator Project to assess and infuse relevant technologies creating a library of ESMF-based and MAP-compliant modeling and assimilation software components; • Using the workflow tools developed to date, collaborate with the scientific community to iteratively gather incremental requirements, then design, and build an operational workflow environment to manage experiment execution, access validation data, and enable complete archival, and retrieval of all experiments: specifically, collaborate on development and planning for operations with GMAO; design and develop a Service Oriented Architecture Interface to the workflow tool enabling remote development of tailored User Interfaces by external parties; make the workflow operational on the NCCS and NAS systems; assure the workflow tool can accommodate a true end-to-end project flow. These project flows will include seamless interfaces to a data portal / Web Map Server and/or an analysis & visualization tool that compares model outputs vs. observations; examples of such tools include a WMS integrated with GRADS/OPeNDAP or external analysis tools such as Giovanni planned for use on Merra; • Provide necessary training for model developers and provide necessary support to integrate GEOS5 AGCM, GEOS5 DAS, and GMI experiments into the workflow environment. This should include assistance for the setup and execution of GEOS5 AGCM and GEOS5 DAS; the setup and execution of the GMI model.		
	MAP Support	SIX MONTH FEVER STATUS	
	ST2: Visualization & Analysis Support		
	• Provide tools for rapid, seamless access to multiple sources of model output and verification data; Work with Government staff to determine the feasibility of using the GrADS analysis tool as a component in the MAPME workflow tool and determine the best approach for collaboration with similar projects now underway by Code 610 (e.g. Giovanni).; • Moderate the Visualization section of the NASA Modeling Guru knowledge base and share the visualization knowledge, practices, and procedures developed for this task with that forum's user community; • Implement end-to-end systems for accessing, visualizing, and analyzing remote-sensing data, research, and simulation results, from network-accessible data server infrastructure to desktop clients and specialized visualization hardware such as multi-screen display clusters: (a) Gather requirements and develop a design presentation showing how such a tool would be used by GMAO, GISS, and other model developers to compare GEOS5 model output to selected observation data or other model output in order to support the assessment and validation of model performance. Compare and contrast development approaches primarily those that leverage existing software and tools; (b) Assess and include standard software tools in the end-to-end system, these may include Taylor diagrams, standard GrADS comparison charts, anomaly correlation plots, etc. as used by a preponderance of the model development community. (c) Maintain and configure existing data portals within SIVO and the NCCS and adapt those existing systems for use by forthcoming projects; (d) Maintain the Hyperwalls in GSFC Buildings 28 and 33 (the GSFC Earth System Science Building) that can display ongoing simulation efforts in conjunction with visualizations of NASA remote sensing data; (e) Leveraging the capabilities of the Hyperwall systems developed for the MAP program, design and implement a Hyperwall system for the LRO control room in GSFC Building 32 to display data and analysis results from ILIADS.		
	MAP Support	SIX MONTH FEVER STATUS	
	ST3: GEOS5 Portal		
	The goal of the GEOS5 Portal is to broaden the deployment and use of the model by researchers at other Government institutions and at universities. The task addresses the high cost of (a) porting the model to unfamiliar hardware environments and (b) training researchers to set up, execute, and reconfigure the model. During the period SIVO will: * Develop a cost-effective strategy to port the model from platform to platform, accounting for compilation of source code, base libraries, directory paths to required data sets, etc.; * Place the GEOS5 model under the workflow tool, including user assistance with setup, execution, and archival of GEOS5 experiments. * Deliver an on-line GEOS5 user's guide implemented through the SKB, with the concept that the user's guide is a living document accepting contributions from the community. In designing and implementing the software and hardware solutions within these areas, staff shall follow the standards of software development that exist within SIVO in which requirements, system design, test plans, and phased deliverables are clearly defined.		
	MAP Support	SIX MONTH FEVER STATUS	
	ST4: Climate@Home		
	SIVO shall complete the integration of the Berkeley Open Infrastructure for Network Computing (BOINC) architecture with the Goddard Institute for Space Studies (GISS) ModelE for use in a highly distributed, desktop computing environment. At the end of the performance period staff shall demonstrate a working prototype of the architecture such that the model can operate under the following operating systems: Windows XP and Mac OSX (both Intel and PowerPC). Deliverable (31 December 2007): One oral status report at the end of the performance period. The status report shall include a demonstration of a working prototype.		
	MAP Support	SIX MONTH FEVER STATUS	
	ST5: Other		

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TASK	PLAN (NOV 2007 - APR 2008)	ACCOMPLISHMENTS	COMMENTS
281945 Global Modeling Initiative The task provides ISE support to the Global Modeling Initiative (GMI) project. These services can be divided into five distinct categories: 1.Software integration, documentation, and maintenance. 2.Execution of routine GMI assessments. 3.Software componentization via the Earth System Modeling Framework (ESMF) 4.User support. 5.Development of a workflow management tool.	GMI	SIX MONTH FEVER STATUS	
	ST1: Software Integration		
	Integrate new computational modules into the GMI system upon request by the GMI steering committee or the GMI project scientist. Bi-weekly progress and revised delivery estimates should be provided to the Principle Investigators (PI's) Maintain a software repository containing the GMI model components. Ensure that GMI operational software provides correct/reproducible results across the set of specified architectures/ computing platforms per staff's existing processes. Track software defects, and implement corrections as solutions are identified. Ensure software modules are coded according to GMI specifications. This includes both source documentation and source coding standards. Integrate ESMF wrapped "TP-CORE" created by the Global Modeling and Assimilation Office. Coordinate with the GMI investigators to anticipate impacts on portability and system structure. Deliverable (15 January 2008): Integrate the GEOS5 FV tranCore within the GMI model. (1 March 2008): Complete coupled-aerosol capability within GMI model.		
	GMI	SIX MONTH FEVER STATUS	
	ST2: Routine Assessments		
	Execute the GMI operational assessments upon request. Prepare job scripts, possibly modify diagnostics, submit batch jobs, and monitor progress through the queues. Coordinate with GMI investigators to ensure that products are valid. Visualization software is a critical aspect for verification of products. Provide data products to the GMI community in a timely fashion via the web, and maintain means to reproduce those products subject to the availability of the computing environment. Deliverable: Data products from routine assessments are to be available to the GMI community within 10 business days of the completion of the assessment.		
	GMI	SIX MONTH FEVER STATUS	
	ST3: ESMF		
	Continue to develop ESMF components and couplers for major subsystems of GMI. Deliverables (1 Dec 2007): Implementation plan for removing remaining elements of legacy ESM layer within GMI. Informal weekly status updates are to occur during the implementation phases.		Deliverable: ESMF-enabled version of the GMI model. Model should use ESMF infrastructure as appropriate including ESMF time management and ESMF grids. Model should contain ESMF component versions of major GMI subsystems.
	GMI	SIX MONTH FEVER STATUS	
	ST4: User Support.		
	Maintain the publicly accessible GMI web site that documents project goals, project status and organization, project publications, software contribution guidelines, user guide (installation and execution), and links to both source code and datasets. Provide technical assistance to members of the GMI community in obtaining, installing, and executing GMI software on supported architectures. Maintain a prioritized list of outstanding functionality requests from the GMI community. Train relevant members of the GMI community in the use of the software revision system used for the repository.		
	GMI	SIX MONTH FEVER STATUS	
	ST5: Workflow Management Tool		
	Participate in relevant meetings with the SIVO MAP ME project to leverage related workflow management tool development; deliver a list of requirements for the workflow management tool (substantial input to be obtained from GMI science team, software requirements review to include GMI science team); deliver/provide feedback on MAPME preliminary design and implementation. Deliverable (31 March 2008): Demonstrate representative GMI simulation using the MAP ME workflow tool.		

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TASK	PLAN (NOV 2007 - APR 2008)	ACCOMPLISHMENTS	COMMENTS
281945 Finite-Volume Core Management	fvCORE	SIX MONTH FEVER STATUS	LLL
	ST1:		
	fvCORE	SIX MONTH FEVER STATUS	
	ST2:		
	fvCORE	SIX MONTH FEVER STATUS	
	ST3:		
	fvCORE	SIX MONTH FEVER STATUS	
	ST4:		
	fvCORE	SIX MONTH FEVER STATUS	
	ST5:		

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TASK	PLAN (NOV 2007 - OCT 2008)	ACCOMPLISHMENTS	COMMENTS
281945 Scientific Visualization and Analysis Support The Software Integration and Visualization Office (SIVO) provides software and system integration services and analysis capabilities for researchers funded by NASA's Science Mission Directorate and Earth Science Technology Office (ESTO). This task provides visualization support to this community for the purpose of analyzing the results of these models and conveying these results to Earth science researchers and the NASA stakeholder community. It also supports the development of simulation and analysis tools that make use of high-end visualization systems.	SVA	SIX MONTH FEVER STATUS	
	ST1: Scientific Visualizations		
	Create visualizations in the form of imagery and animations to represent the data inputs, simulation results, technical analyses, or any other aspect of the relevant modeling efforts. Assist other scientific research efforts using NCCS supercomputers with visualization production as required.		
	SVA	SIX MONTH FEVER STATUS	
	ST2: Visualization Prototypes		
	Investigate and prototype new hardware and software technologies for visualization that will help meet future requirements for high-volume data analysis of multivariate, time-dependent simulation results. Prototype 3D visualization software for users of the NCCS Discover cluster. Identify methods for making high-end visualization tools more accessible by the scientists. Identify technologies that would be appropriate for scientific analysis of products generated by Codes 610.1, 611, and 614. Moderate the "Visualization" section of the NASA Modeling Guru knowledge base and share the visualization knowledge, practices, and procedures developed for this task with that forum's user community. Deliverable (31 December 2007): Oral report of accomplishments; (30 April 2008): Oral report of accomplishments.		
	SVA	SIX MONTH FEVER STATUS	
	ST3: Sensor Web Simulator		
	Support the development of a meteorological sensor web: Complete the design of the remaining "science layer" subcomponents: data processing system, weather prediction system, external control system, command and control system; support the ESTO annual report; provide periodic status reports of the SWS design activity for the designated science panel. Support the Year Two ESTO interim report. Provide periodic status reports to the science team. Deliverable (1 February 2008): Sensor web architectural preliminary design review. Deliverable (29 February 2008): Delivery of material for ESTO interim report).		
	SVA	SIX MONTH FEVER STATUS	
	ST4: Ultrafast Networks		
	Support the LambdaRAM final report; assist the University of Illinois - Chicago with preparations for the demonstration of using the LambdaRAM technology to stride a terabyte data store. Deliverable (31 December 2007): LambdaRAM final report).		
	SVA	SIX MONTH FEVER STATUS	
	ST5: Other		

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TASK	PLAN (NOV 2007 - APR 2008)	ACCOMPLISHMENTS	COMMENTS
281945 GISS Support (In House activity)	GISS Support	SIX MONTH FEVER STATUS	
	ST1: Integration of fvCore		
	Government staff shall complete the integration and test of the finite-volume dynamical core into GISS Model E.		
	GISS Support	SIX MONTH FEVER STATUS	
	ST2: Other		
	GISS Support	SIX MONTH FEVER STATUS	
	ST3: Other		
	GISS Support	SIX MONTH FEVER STATUS	
	ST4: Other		
	GISS Support	SIX MONTH FEVER STATUS	
	ST5: Other		

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TASK	PLAN (NOV 2007 - APR 2008)	ACCOMPLISHMENTS	COMMENTS
281945 MAP Project Scientist The role of Project Scientist was added to the program to help focus the various MAP-funded research efforts into crosscutting themes that will better enable "Earth system" science research. At the core of the concept is the MAPME that is essential to provide the necessary "glueware" both for integrating the disparate modeling software and for bringing together the stovepiped science organizations who develop the models.	MAP Project Scientist	SIX MONTH FEVER STATUS	
	ST1: MAP Planning		
	Develop strategic goals for the MAP program; define projects to support these goals; review program and project plans; consult on priorities and reconciliation of resource conflicts; integrate information from MAP program and national communities; plan and develop communication infrastructure (MAP program community building); acquire and organize information from the MAP community; provide interface between the project office and the science community; consult on priorities and resource conflicts.		
	MAP Project Scientist	SIX MONTH FEVER STATUS	
	ST2: Other		
	MAP Project Scientist	SIX MONTH FEVER STATUS	
	ST3: Other		
	MAP Project Scientist	SIX MONTH FEVER STATUS	
	ST4: Other		
	MAP Project Scientist	SIX MONTH FEVER STATUS	
	ST5: Other		

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TASK	PLAN (NOV 2007 - APR 2008)	ACCOMPLISHMENTS	COMMENTS
929099 Level II Support NASA maintains a variety of reasonably standard high-end computing (HEC) environments, and provides access to additional systems at other agencies to its scientific researchers. Currently, the primary NASA systems are located at Goddard (NCCS) and at Ames (NAS), and the primary external resources are provided via an agreement with Oak Ridge National Labs. This task provides support for NASA funded researchers that use high-end computing system including: • Level II help-desk support • Knowledge base • Training • Optimization/Parallelization • Development of tools and techniques to aid the NASA HEC community • Extending and/or refactoring legacy high-end computing applications • Base libraries ("Baselibs")	Level II	SIX MONTH FEVER STATUS	
	ST1: Level II Support for NASA computing centers		
	Staff shall provide level II application support for users of NASA's two primary computing centers: NCCS and NAS. The nature of such support consists of providing assistance with standard high-performance tools and environments, including programming languages, compilers, debuggers, profilers, and queuing systems. Support is primarily via email and phone, but depending on demand, may extend to one-on-one training sessions. Deliverable: 15th of each month: Deliver brief written summary of Level II tickets for the preceding month.		
	Level II	SIX MONTH FEVER STATUS	
	ST2: Knowledge Base		
	SIVO has implemented a tool to bring knowledge management services to the high end computing and scientific modeling communities. This knowledge base, or "Modeling Guru", provides a method for users to rapidly share information or to request customized support from the Level II help desk. During 2008 the knowledge base will be populated with reference material relevant to the major projects (i.e., GISS and GMAO). Trial users, already scheduled to begin using the system in October 2007, will gradually increase during the period. Staff shall develop strategies to perform effective development and maintenance of the tool. Deliverable (30 November 2007): Preliminary design of a highly functional, extensible user interface (home page) for the tool; oral report on the status of developing effective methods to rapidly populate the database such that it becomes a first source of information for the community; (15 December 2007) Status report - transition plan that describes how existing methods of user support will gradually be replaced with the knowledge base (shall include a plan for beta testing); (29 February 2008) Final design review of the user interface, oral report on the status of populating the database, status report on the transition plan.		
	Level II	SIX MONTH FEVER STATUS	
	ST3: Training		
	Staff shall develop appropriate training materials and provide training to the NASA HEC community. Staff shall solicit representatives of the user community to determine which training areas would be the most effective. Staff shall develop at least one training program to educate the community on the particulars of the current computing environment. Examples of other potential training topics include Fortran, MPI, OpenMP, CVS, software design, etc. Deliverable (30 November 2007): Delivery of training plan, draft schedule of seminar series on Fortran 2003 features, include tentative speakers; (1 February 2008): Preliminary draft of curriculum and speakers for summer course on best practices for software engineering for science applications; (30 April 2008): Report on training activities, lessons learned, and recommendations for next performance period. (Monthly, beginning January 2008: Host seminars on Fortran 2003 features).		
	Level II	SIX MONTH FEVER STATUS	
	ST4: Portable Asynchronous I/O Layer		
	Staff shall provide routine maintenance, as deemed necessary by the Government, of the previous-developed asynchronous I/O layer that is usable by members of the NASA HEC community. This layer should improve the performance of many parallel applications by effectively relaying output to high-speed memory prior to its ultimate destination on disk.		
	Level II	SIX MONTH FEVER STATUS	
	ST5: Optimization / Parallelization		
	Staff shall design and implement performance enhancements on designated NASA applications. Staff shall report status of optimizations to the Government as stated in the deliverable items. Deliverable (30 November 2007): Requirements review for GMAO 4DVar adjoint optimization (goal is 50% improvement in overall performance); (29 February 2008): Status report on GMAO 4D Var adjoint optimization; (30 April 2008): Testing and validation results from completed, optimized adjoint scheme.		
	Level II	SIX MONTH FEVER STATUS	
	ST6: Baselibs		
	Baselibs is a robust mechanism for installing standard 3rd party software libraries/packages on various computing systems in a standard, portable manner. In addition to maintaining Baselibs on existing systems (including support for updates), staff shall port Baselibs to new computing platforms as necessary. It is anticipated that up to two new ports will be necessary during each six month period. Deliverables (1 December 2007): Complete delivery of Baselibs to the SIVO development platform, 'sensorweb'; (29 February 2008): complete delivery to NAS platforms; (30 April 2008): delivery of Baselibs documentation; report on porting to other platforms as needed.		
	Level II	SIX MONTH FEVER STATUS	
	ST7: Software Tools		
	The government envisions the need for improved tools for maintaining and developing Fortran-based software. Staff is requested to support the development of appropriate tools to facilitate cost-effective evolution and maintenance of large scientific codes. Staff shall develop a prototype toolkit for capturing the behavior of legacy software systems in a semi-automatic manner suitable for regular verification testing. Staff shall implement key software modules, develop appropriate documentation, and apply the toolkit against a selected legacy application. Deliverable (29 February 2008): Support development of Fast Fortran Transformation Toolkit by capturing behavior of at least one simple legacy system. Captured behavior should be expressed as a suitable automated test.		
	Level II	SIX MONTH FEVER STATUS	
	ST8: Technology Outlook		
	Under this subtask staff shall experiment with new Cell Broadband Engine processor and determine if the hardware will be useful for NASA Earth Science modeling efforts. Staff shall also provide a white paper which discusses the technology roadmap for hardware, Earth Science missions, and implications to the software during the period 2008-2013. Deliverable (30 November 2007): Oral report discussing the establishment of a work plan with the NASA Center for Computational Sciences at Goddard and the High Performance Computing Portfolio at NASA Headquarters; (29 February 2008): First status briefing on the five-year technology roadmap white paper that shall include the following: * Discussion of characteristics of high-end and desktop computing hardware for the period 2008-2013; * Discussion of likely information technology requirements for NASA missions expected to occur during the period of the Earth Science Division Decadal Plan; * Discussion of likely requirements for NASA Earth Science models and implications for software and middleware. (30 April 2008): Delivery of final report. March 30, 2008: Complete CELL implementation of GEOS-5 solar radiation component. Deliverable should include distribution across SPE's as well as vectorization of major loops. April 30, 2008: Draft feasibility study for the use of CELL within scientific applications.		
	Level II	SIX MONTH FEVER STATUS	
	ST9: HEC Benchmark Suite		
	To support NCCS acquisition and related processes, staff shall create and maintain a suite of relevant benchmark codes from the science community. The suite is intended to remain small yet relevant to the HEC concerns of the scientific modeling community. Staff shall include plans to handle routine additions/deletions of applications from the benchmark suite, regular releases/updates of primary applications, and managing multiple configurations and grid resolutions. Staff shall work with the application developers to create lightweight documentation for porting, building, running, and validating applications within the suite. Deliverables: (30 November 2007): Deliver draft version for plans to host benchmark suite as well as deliver elements to designated HPC vendors. (29 February 2008): Provide initial release of benchmark applications including GEOS-5, cubed-sphere FV core and J. Centrella's GR code; (30 April 2008): Extend suite to include GEOS-5 DAS.		
	Level II	SIX MONTH FEVER STATUS	
	ST10: Other		

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TASK	PLAN (NOV 2007 - APR 2008)	ACCOMPLISHMENTS	COMMENTS
RDMS Earth Science Division Web Site The Earth Sciences Division at NASA Goddard Space Flight Center has requested web page development and maintenance from the Software Integration and Visualization Office (SIVO).	ESD Web Site	SIX MONTH FEVER STATUS	LLL
	ST1: Main		
	Provide technical writing, editing and graphics for the Earth Sciences Division web site; Generate new Top Stories of all Earth Sciences Division news reported on NASA Portal, GSFC Portal, and other news outlets;Create corresponding graphics for “Top Stories”; Update Earth Sciences Division web site, Earth Sciences Portal, Earth Educator Portal, Earthgazer Portal, and legacy sites such as Disaster Finder as required by 610 management.		
	ESD Web Site	SIX MONTH FEVER STATUS	
	ST2: Other		
	ESD Web Site	SIX MONTH FEVER STATUS	
	ST3: Other		
	ESD Web Site	SIX MONTH FEVER STATUS	
	ST4: Other		
	ESD Web Site	SIX MONTH FEVER STATUS	
	ST5: Other		

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TASK	PLAN (NOV 2007 - APR 2008)	ACCOMPLISHMENTS	COMMENTS
NASA High End Computing Portfolio - Science Writer	HEC Writer	SIX MONTH FEVER STATUS	LLL
	ST1: Main		
	Staff shall prepare reports/articles on the scientific and technical accomplishments of the HEC Program, including users of high-end computing resources at Ames Research Center (ARC) and Goddard Space Flight Center (GSFC). Material shall appear in the CISTO News, other NASA publications, national magazines/newsletters, and websites. Staff shall work with ARC and GSFC personnel to establish and maintain a HEC Program website. Staff shall develop a proposal to produce documentary-style and other videos incorporating a variety of material, including scientific visualizations, for display in science museums, on NASA TV, and in other venues. Staff shall write news releases for distribution by NASA Headquarters and NASA Center Public Affairs Offices and cooperate with universities and laboratories on releases about HEC Program efforts. Staff shall facilitate media interviews of HEC Program-enabled researchers and use of visual material by media, museums, and others. Staff shall promote HEC Program activities in NASA-sponsored exhibits at conferences and other events. Staff shall prepare promotional materials, such as brochures, posters, and explanatory displays, for national conferences. Deliverables: Monthly Progress Reports: 15th of each month utilizing standard template and including monthly cost data and monthly accruals. Deliver articles for the CISTO News, relevant for this period of performance.		
	HEC Writer	SIX MONTH FEVER STATUS	
	ST2: Other		
	HEC Writer	SIX MONTH FEVER STATUS	
	ST3: Other		
	HEC Writer	SIX MONTH FEVER STATUS	
	ST4: Other		
	HEC Writer	SIX MONTH FEVER STATUS	
	ST5: Other		

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TASK	PLAN (NOV 2007 - APR 2008)	ACCOMPLISHMENTS	COMMENTS
832419 Scientific Visualization Studio - Public Affairs Office Support This task provides visualization support to NASA's Earth and space science missions and research efforts for the purpose of conveying NASA's mission and research objectives and results to NASA's stakeholder community.	SVS-PAO	SIX MONTH FEVER STATUS	
	ST1: Scientific Outreach		
	Create visualizations in the form of imagery and animations to support specific outreach efforts defined by either NASA PAO producers or other NASA groups requiring such products as defined by the ATR. These visualization products must accurately represent the acquired data, simulation results, technical analyses, or other aspect of the NASA missions and research required for a particular outreach effort. Create visual materials to support any NASA press or media activities at the fall meeting of the American Geophysical Union; • Develop prototype visual products to specifically support the Landsat Data Continuity Mission (LDCM), the LANDSAT Image Mosaic of Antarctica (LIMA), and International Polar Year activities; • Create visual materials to support NASA video files - compilations of material defined and prioritized by the GSFC PAO office to publicize NASA activities; • Create animations and imagery to directly support documentary and informal education producers, as defined and prioritized by GSFC PAO and other GSFC outreach forums; • Create visual material to support PAO-selected Earth and Lunar Science productions for the Science on a Sphere display at GSFC and associated museums; • Create prototype visualizations for THEMIS, SDO, and the CCMC, illustrating both observational and model data, and STEREO, including stereo images for various stereo visualization systems; • Create prototype visualizations to illustrate LRO mission objectives, illustrating temperature, topography, hydrogen ion, and other data profiles; Develop a signature LRO visualization for the November 2007 LRO Science Team Meeting.		
	SVS-PAO	SIX MONTH FEVER STATUS	
	ST2: Visualization Tools		
	Adapt and/or create visualization software, tools, and systems as necessary to meet the visualization requirements of this customer base. Create visualization tools and processes to support the visualization of Sun-Earth Connection missions, LRO, and the production of Science on a Sphere material; Develop new rendering pipelines for visualizing simultaneous measurements from new and existing Earth Science missions;Perform system administration on SVS systems as necessary to keep the SVS visualization and rendering infrastructure performing effectively.		
	SVS-PAO	SIX MONTH FEVER STATUS	
	ST3: Web Archive		
	Staff shall report all visualization products through inclusion in a web-accessible archive of visual materials and associated metadata for reuse by internal and external users. • Particular emphasis is to be placed this period on preparing for distribution visual material that relates to the International Polar Year (IPY).		
	SVS-PAO	SIX MONTH FEVER STATUS	
	ST4: Other		
	SVS-PAO	SIX MONTH FEVER STATUS	
	ST5: Other		

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TASK	PLAN (NOV 2007 - APR 2008)	ACCOMPLISHMENTS	COMMENTS
Management / Quality Assurance The Software Integration and Visualization Office (SIVO) provides software and system integration services and analysis capabilities for researchers funded by NASA's Science Mission Directorate and Earth Science Technology Office (ESTO). This task provides visualization support to this community for the purpose of analyzing the results of these models and conveying these results to Earth science researchers and the NASA stakeholder community. It also supports the development of simulation and analysis tools that make use of high-end visualization systems.	Management	SIX MONTH FEVER STATUS	
	ST1: Local Management		
	Staff shall ensure that * deliverable items for all tasks during the period of performance are met according to task schedules; * the SIVO Master Schedule is updated accordingly (this includes the population of task progress fields consistent with monthly technical progress reports and any updates to the contractor staffing plan); * a monthly report is provided that reports hours billed against individual tasks for each contractor and subcontractor.		
	Management	SIX MONTH FEVER STATUS	
	ST2: Strategic Planning		
	The contractor shall participate in SIVO strategic planning discussions on a regular basis. The contractor shall provide an objective assessment of the strategic direction of the office and shall contribute to the five-year Office road map.		
	Management	SIX MONTH FEVER STATUS	
	ST3: Administrative Support		
	The contractor shall provide administrative support to ensure the smooth operation of the SIVO office. Under this subtask the contractor shall: * ensure the delivery of mail to SIVO civil servants and contractors; * manage the calendar of the SIVO Office Head; * manage SIVO Government-tagged equipment per NASA regulations; * respond to SIVO management requests for basic office functions, including copying, maintaining spreadsheets, formatting documents; * maintaining an electronic repository of receipts and miscellaneous tracking documents; * provide travel arrangements and reimbursements for NASA employees.		
	Management	SIX MONTH FEVER STATUS	
	ST4: Quality Assurance		
	The contractor shall produce a quality assurance plan to address processes and procedures for all tasks. The purpose of the plan is to minimize cost and reduce risk to the projects. The contractor is required to provide an oral report that describes the quality assurance plan and progress on its execution (to be delivered at 3 and 6 months into the performance period).		
	Management	SIX MONTH FEVER STATUS	
	ST5: RDMS Ed & Outreach		
	Government support to Code 610 Education and Public Outreach activities.		

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